Dimensions of the type (measured on skin) :—
Head and body 240 mm. ; tail 93 ; hind foot 40.
Skull : median length 54 ; greatest diagonal length 57 ; condylo-incisive length 56 ; zygomatic breadth 39·5 ; nasals 18 × 9 ; interorbital breadth 14·7 ; least breadth across brain-case 24·5; bimeatal breadth 38·5 ; palatilar length 25 ; diagonal length of bullæ 17·7, breadth at right angles to last 8·5. Upper cheek-tooth series (crowns) 11·8, diameter of p^4 5.

Hab. Esperanza, near Conception, Prov. Nuflo de Chaves, E. Bolivia.

Type. Adult male. B.M. no. 20. 11. 17. 6. Original number 4. Collected July 1919, and presented by Walter Goodfellow, Esq.

This tucu-tucu is no doubt nearly allied to *C. boliviensis*, but differs by the cranial characters above described. The species from Matto Grosso described by Ribeiro as *C. rondoni* and *bicolor* are evidently different in colour, and their cranial measurements are quite inconsistent with those of *C. goodfellowi*.

"From the forests."—*W. G.*

XI.—*Two new Aquatic Annelids.*

By Hilderic Friend.

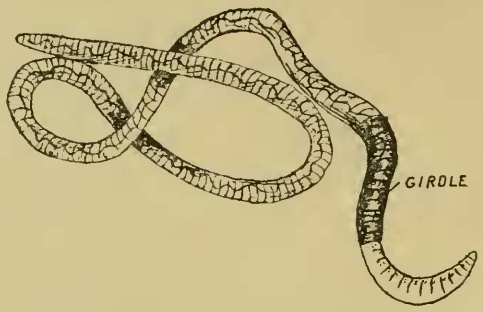
1. *Sparganophilus elongatus*, Fr.

In 1910 Mr. Bartlett, of Pencarrow, Washaway, Cornwall, sent me some annelids from the bottom of a slate tank in which water-lilies were grown. Among them were a number which were new to me. These were provisionally named *Helodrilus elongatus* (3). I have recently had occasion to examine them afresh, and find that they belong to the genus *Sparganophilus*. The trivial name is retained, and the worm is now described as *Sparganophilus elongatus*, Friend.

When fully extended *Sp. elongatus* measures from 7 to 8 inches, agreeing in this respect with *Sp. eiseni*, Smith. Number of segments 200 to 250, which may be compared with *Sp. benhami*, Eisen. Colour chocolate-brown, the anterior segments flesh-coloured. The girdle is clay-coloured and extends from segment 15 to 27. I found the tubercular bands in one specimen on segments 19–22. In April, when the material was collected, maturity may not have been fully attained. This may be the reason why I failed to find any

spermathecæ. The prostomium is typical, and is destitute alike of pore and suture. No dorsal pores have been seen. The male pores were found on one specimen close to the 18/19 intersegmental groove.

Fig. 1.



Sparganophilus elongatus, Fr., Pencarrow, Cornwall.
Natural size.

The worm is stiff and wiry, disagreeable to the touch, and very irritable. The wiriness is due to the great development of the longitudinal muscle-layer. There are, as usual, 8 setæ on each segment, those in the ventral bundles of segments 8 to 11 being conspicuous. Apparently these a e specially

Fig. 2.

Sparganophilus elongatus. Fully developed seta. Enlarged.

developed for sexual purposes. There is a slight tendency to ornamentation on all the setæ, whether fully developed or young.

In one important point the new worm differs strikingly from *Sp. tamesis*, Benham. There is no "large truncated conical somite carrying the dorsal anus at its end" as a pygidium. The anus is lumbricid in character, and may be described as a dorso-ventral terminal pore. The girdle is not

prominent, at least in the spring, and the grooves between the segments are usually quite distinct. A deep groove traverses the dorsal surface of the worm, exactly as described by Benham for the Thames species, when placed in alcohol. I observed, however, that those which were preserved in weak formaldehyde retained the cylindrical form unchanged.

The most anterior nephridia vary in position, and seem to commence, sometimes in segment 12, at others in 13 or 14, the postseptal being limited to the next segment behind

Fig. 3.

Sparganophilus elongatus. Young seta. Enlarged.

these. The nephridiopores are immediately in front of the ventralmost setæ, instead of in the mid-line between the ventral pair.

Internally the structure agrees in the main with *Sp. tamesis*. There are, however, well-marked dilatations in segments 15 to 18, as well as in the vascular system of 9, 10, and 11. The ventral vessel is much branched in the fifteenth and sixteenth segments. The œsophagus is distinctly modified in the eighth and ninth segments. There are no œsophageal glands, but in segment 3 are certain bodies which may be compared with the cœlomic glands of *Sp. eiseni*, Smith. They have not been recorded hitherto for either *Sp. benhami* or *Sp. tamesis*.

2. *Anagaster fontinalis*, gen. et sp. n.

While residing in Suffolk in 1907 I found some new well-worms at Mildenhall. There seem to have been two species, one of which was, in all probability, a *Haplotaxis* related to or identical with that found in Cambridge by Beddard (*Phreatothrix cantabrigiensis*, Bedd.). The other appears to me to be not only a new species, but also a new genus, and the first indisputable member of the Criodrilinæ, of indigenous habit, yet found in this country.

The length of *A. fontinalis* is about 2 inches, the number of segments 100. The male pores are in front of the girdle on segment 15 as in *Criodrilus*, and not within the girdle limits as in *Sparganophilus*. The girdle commences

on segment 21. There is no muscular gizzard, nor are œsophageal glands, prostate glands, or cœlomic glands to be found. There is also an absence of dorsal pores and head-pore. This is characteristic of aquatic forms. Spermathecæ have not been found and appear to be wanting. The setæ, which are in four pairs, are not ornamented. Tubercular or pubertatis band present on certain girdle-segments.

This generic description may be supplemented by some notes on the species. *A. fontinalis* differs from the other members of the family so far described in the matter of length. Nearly all the known Criodrilinæ are long and slender, but this worm closely resembles our native *Allurus* (*Eiseniella*). The male pore is within a very conspicuous papilla, which extends (as in *Dendrobœna mammalis*, Sav.) over the adjoining segments 14–16. The absence of a gizzard, however, shows it to be a true water-worm, and the internal anatomy agrees in general with that of the Criodrilinæ. The

Fig. 4.

Anagaster fontinalis. Slightly enlarged.

girdle is saddle-shaped, the ventral surface of the girdle-segments being quite unaffected. The anterior portion of the girdle is not very clearly defined. It affects segment 21 and extends back to segment 32 or 33. The tubercular band is on segments 29–31. Ventrally segments 11–14 and 29–31 are more tumid than the others. The living worm is red or flesh-coloured, and the abundant blood-vessels are to be seen through the delicate epidermis. The anus is terminal.

The internal details were not easy to determine, owing to the specimens having passed maturity. The development of the girdle is remarkable on the dorsal surface. The principal heart is in segment 10, while a somewhat less pronounced dilatation is found in the fifteenth segment. The typhlosole is seen in each segment to act as a valve. The pharynx extends to the anterior third of segment 5, and shows a structure which suggests rudimentary salivary glands. In segments 9, 11, 12 are also some organs which, by their glairy

appearance, suggest calciferous glands. But, if we compare *Alma emini*, Mich., we may assume for the present that they are receptacles for spermatozoa. I find no other spermathecæ, nor are sperm-funnels present in the specimen sectionized. The sexual apparatus being degenerate, I can only discover a few traces of the ovary or testes, especially in the twelfth segment.

As I know all the Oligochæts which have been found in this country, both indigenous and imported, I have no hesitation in saying that *Anagaster* is a true British representative of the subfamily Criodrilinæ.

Definition : *Anagaster fontinalis*, sp. n.

Length 2 inches, segments 100. Girdle on segments 21, 22–32, 33, saddle-shaped, and very conspicuous. Tubercular band on segments 29–31 ; these segments, as well as 11–14, being more tumid. Male pores, with large papilla extending over the two adjoining segments, on 15. No head-pore or dorsal pores, calciferous, œsophageal, septal, or cœlomic glands. Typhlosole with valve-like arrangement. Seminal vessels in segments 9–12. Large heart to vascular system in the tenth segment. Setæ paired, not ornamented. Spermathecæ appear to be absent ; no muscular gizzard ; pharynx modified laterally.

Hab. Taken from a well at North Terrace, Mildenhall, Suffolk, June 1907.

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XII.—*New Species of Palæarctic* Simuliidæ *in the British Museum* (*Diptera Nematocera*). By F. W. Edwards.

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Simulium (*Prosimulium*) *gallii*, sp. n., ♀.

Very similar to *S.* (*P.*) *hirtipes*, Fries, in structure and coloration, differing only as follows :—Front distinctly broader than in *hirtipes*, very little narrower at the level of